



# SEQUENCE LISTING

<110> Takano, Eriko  
Bibb, Mervyn

<120> Antibiotic Production

<130> 0380-P02329US1

<140> US 10/017,471

<141> 2001-10-23

<150> US 60/242,561

<151> 2000-10-23

<160> 19

<170> PatentIn Ver. 2.1

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<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

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18

<210> 2

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 2

gtcctgstgg ccsigtsacsc gsac

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<210> 3

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 3

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22

<210> 4

<211> 25

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 4

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
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tatccagctg accgggaacg cgtc

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<210> 6

<211> 24

<212> DNA

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

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24

<210> 7

<211> 22

<212> DNA

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

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<210> 8

<211> 22

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

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22

<210> 9

<211> 22

<212> DNA

<213> Artificial Sequence

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 <223> Description of Artificial Sequence: Synthetic  
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 <223> Description of Artificial Sequence: Synthetic  
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<400> 10  
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<210> 11  
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 <223> Description of Artificial Sequence: Synthetic  
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<400> 11  
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<210> 12  
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 <212> DNA  
 <213> Streptomyces coelicolor

<400> 12  
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 gatcgagttg gcatcggacg cagaattgat caaaactact gcttcgggca tgggtccccc 180  
 ccaggaatca tgtgatgccg agctgttctg tatgcgcgaa cgtaagata cagactgagc 240  
 ggtttttttt ctatccttcc cgggggagac atgaacaagg aggcaggcat ggccaagcag 300  
 gaccgggcca tccgcacgcg gcagacgatc ctggacgccc cggcgcaggc cttcgagaag 360  
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<210> 13  
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 <212> DNA  
 <213> Streptomyces coelicolor

<400> 13  
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 tccttggtca tgtctcccc gggaaggata gaaaaaaaaac cgctcagctc gtatcttaac 180  
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 cagtagtttt gatcaattct gcgtccgatg ccaactcgat cgaacaaacc gcattgccgg 300  
 ttccgatggc gcttggtccac cggaccaggg tgcaggacgc gttcccggtc agctggatac 360  
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<210> 14  
 <211> 57  
 <212> PRT  
 <213> Streptomyces coelicolor

<400> 14  
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 Arg Val Gln Asp Ala Phe Pro Val Ser Trp Ile Pro Lys Gly Gly Asp  
 35 40 45  
 Arg Phe Ser Val Thr Ala Val Leu Pro  
 50 55

<210> 15  
 <211> 37  
 <212> PRT  
 <213> Streptomyces coelicolor

<400> 15  
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 1 5 10 15  
 Ala Ala Ala Gln Val Phe Glu Lys Gln Gly Tyr Gln Ala Ala Thr Ile  
 20 25 30  
 Thr Glu Ile Leu Lys  
 35

<210> 16  
 <211> 215  
 <212> PRT  
 <213> Streptomyces coelicolor

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 Thr Glu Ile Leu Lys Val Ala Gly Val Thr Lys Gly Ala Leu Tyr Phe  
 35 40 45  
 His Phe Gln Ser Lys Glu Glu Leu Ala Leu Gly Val Phe Asp Ala Gln  
 50 55 60  
 Glu Pro Pro Gln Ala Val Pro Glu Gln Pro Leu Arg Leu Gln Glu Leu  
 65 70 75 80  
 Ile Asp Met Gly Met Leu Phe Cys His Arg Leu Arg Thr Asn Val Val  
 85 90 95  
 Ala Arg Ala Gly Val Arg Leu Ser Met Asp Gln Gln Ala His Gly Leu  
 100 105 110  
 Asp Arg Arg Gly Pro Phe Arg Arg Trp His Glu Thr Leu Leu Lys Leu  
 115 120 125

Leu Asn Gln Ala Lys Glu Asn Gly Glu Leu Leu Pro His Val Val Thr  
 130 135 140  
 Thr Asp Ser Ala Asp Leu Tyr Val Gly Thr Phe Ala Gly Ile Gln Val  
 145 150 155 160  
 Val Ser Gln Thr Val Ser Asp Tyr Gln Asp Leu Glu His Arg Tyr Ala  
 165 170 175  
 Leu Leu Gln Lys His Ile Leu Pro Ala Ile Ala Val Pro Ser Val Leu  
 180 185 190  
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 195 200 205  
 Leu Ala Pro Thr Gly Lys Asp  
 210 215

<210> 17  
 <211> 313  
 <212> PRT  
 <213> Streptomyces coelicolor

<400> 17  
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 20 25 30  
 Arg Val Gln Asp Ala Phe Pro Val Ser Trp Ile Pro Lys Gly Gly Asp  
 35 40 45  
 Arg Phe Ser Val Thr Ala Val Leu Pro His Asp His Pro Phe Phe Ala  
 50 55 60  
 Pro Val His Gly Asp Arg His Asp Pro Leu Leu Ile Ala Glu Thr Leu  
 65 70 75 80  
 Arg Gln Ala Ala Met Leu Val Phe His Ala Gly Tyr Gly Val Pro Val  
 85 90 95  
 Gly Tyr His Phe Leu Met Thr Leu Asp Tyr Thr Cys His Leu Asp His  
 100 105 110  
 Leu Gly Val Ser Gly Glu Val Ala Glu Leu Glu Val Glu Val Ala Cys  
 115 120 125  
 Ser Gln Leu Lys Phe Arg Gly Gly Gln Pro Val Gln Gly Gln Val Asp  
 130 135 140  
 Trp Ala Val Arg Arg Ala Gly Arg Leu Ala Ala Thr Gly Thr Ala Thr  
 145 150 155 160  
 Thr Arg Phe Thr Ser Pro Gln Val Tyr Arg Arg Met Arg Gly Asp Phe  
 165 170 175  
 Ala Thr Pro Thr Ala Ser Val Pro Gly Thr Ala Pro Val Pro Ala Ala  
 180 185 190  
 Arg Ala Gly Arg Thr Arg Asp Glu Asp Val Val Leu Ser Ala Ser Ser  
 195 200 205

Gln Gln Asp Thr Trp Arg Leu Arg Val Asp Thr Ser His Pro Thr Leu  
 210 215 220  
 Phe Gln Arg Pro Asn Asp His Val Pro Gly Met Leu Leu Leu Glu Ala  
 225 230 235 240  
 Ala Arg Gln Ala Ala Cys Leu Val Thr Gly Pro Ala Pro Phe Val Pro  
 245 250 255  
 Ser Ile Gly Gly Thr Arg Phe Val Arg Tyr Ala Glu Phe Asp Ser Pro  
 260 265 270  
 Cys Trp Ile Gln Ala Thr Val Arg Pro Gly Pro Ala Ala Gly Leu Thr  
 275 280 285  
 Thr Val Arg Val Thr Gly His Gln Asp Gly Ser Leu Val Phe Leu Thr  
 290 295 300  
 Thr Leu Ser Gly Pro Ala Phe Ser Gly  
 305 310

<210> 18  
 <211> 262  
 <212> PRT  
 <213> Streptomyces coelicolor

<400> 18  
 Met Arg Ala His Gly Thr Arg Tyr Gly Arg Pro Leu Glu Gly Lys Thr  
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 20 25 30  
 Arg Leu Ala Ala Asp Gly Ala Leu Val Ala Val His Tyr Gly Ser Ser  
 35 40 45  
 Glu Ala Ala Ala Arg Glu Thr Val Glu Thr Ile Arg Ser Ser Gly Gly  
 50 55 60  
 Gln Ala Leu Ala Ile Arg Ala Glu Leu Gly Val Val Gly Asp Ala Ala  
 65 70 75 80  
 Ala Leu Tyr Ala Ala Phe Asp Ala Gly Met Gly Glu Phe Gly Val Pro  
 85 90 95  
 Pro Glu Phe Asp Ile Leu Val Asn Asn Ala Gly Val Ser Gly Ser Gly  
 100 105 110  
 Arg Ile Thr Glu Val Thr Glu Glu Val Phe Asp Arg Leu Val Ala Val  
 115 120 125  
 Asn Val Arg Ala Pro Leu Phe Leu Val Gln His Gly Leu Lys Arg Leu  
 130 135 140  
 Arg Asp Gly Gly Arg Ile Ile Asn Ile Ser Ser Ala Ala Thr Arg Arg  
 145 150 155 160  
 Ala Phe Pro Glu Ser Ile Gly Tyr Ala Met Thr Lys Gly Ala Val Asp  
 165 170 175  
 Thr Leu Thr Leu Ala Leu Ala Arg Gln Leu Gly Glu Arg Gly Ile Thr  
 180 185 190

Val Asn Ala Val Ala Pro Gly Phe Val Glu Thr Asp Met Asn Ala Arg  
195 200 205

Arg Arg Gln Thr Pro Glu Ala Ala Ala Leu Ala Ala Tyr Ser Val  
210 215 220

Phe Asn Arg Ile Gly Arg Pro Asp Asp Ile Ala Asp Val Val Ala Phe  
225 230 235 240

Leu Ala Ser Asp Asp Ser Arg Trp Ile Thr Gly Gln Tyr Val Asp Ala  
245 250 255

Thr Gly Gly Thr Ile Leu  
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<210> 19  
<211> 4346  
<212> DNA  
<213> Streptomyces coelicolor

<400> 19

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